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SERIAL NUMBER	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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07/789,300 11/12/91 NILSSEN

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EXAMINER

ZAKABIAN, A

ART UNIT

PAPER NUMBER

2502

DATE MAILED:

04/10/92

OLU K. NILSSEN
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BARRINGTON, IL 60010

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

☒ This application has been examined ☐ Responsive to communication filed on _____ ☐ This action is made final.

A shortened statutory period for response to this action is set to expire 3 month(s), _____ days from the date of this letter.
Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Part I THE FOLLOWING ATTACHMENT(S) ARE PART OF THIS ACTION:

- | | |
|---|---|
| 1. <input type="checkbox"/> Notice of References Cited by Examiner, PTO-892. | 2. <input type="checkbox"/> Notice re Patent Drawing, PTO-948. |
| 3. <input type="checkbox"/> Notice of Art Cited by Applicant, PTO-1449. | 4. <input type="checkbox"/> Notice of Informal Patent Application, Form PTO-152 |
| 5. <input type="checkbox"/> Information on How to Effect Drawing Changes, PTO-1474. | 6. <input type="checkbox"/> _____ |

Part II SUMMARY OF ACTION

1. ☒ Claims 20-37 are pending in the application.
Of the above, claims _____ are withdrawn from consideration.
2. ☒ Claims 1-19 have been cancelled.
3. ☐ Claims _____ are allowed.
4. ☒ Claims 20-37 are rejected.
5. ☐ Claims _____ are objected to.
6. ☐ Claims _____ are subject to restriction or election requirement.
7. ☐ This application has been filed with informal drawings under 37 C.F.R. 1.85 which are acceptable for examination purposes.
8. ☐ Formal drawings are required in response to this Office action.
9. ☐ The corrected or substitute drawings have been received on _____. Under 37 C.F.R. 1.84 these drawings are ☐ acceptable; ☐ not acceptable (see explanation or Notice re Patent Drawing, PTO-948).
10. ☐ The proposed additional or substitute sheet(s) of drawings, filed on _____, has (have) been ☐ approved by the examiner; ☐ disapproved by the examiner (see explanation).
11. ☐ The proposed drawing correction, filed _____, has been ☐ approved; ☐ disapproved (see explanation).
12. ☐ Acknowledgement is made of the claim for priority under U.S.C. 119. The certified copy has ☐ been received ☐ not been received ☐ been filed in parent application, serial no. _____; filed on _____.
13. ☐ Since this application appears to be in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under Ex parte Quayle, 1935 C.D. 11; 453 O.G. 213.
14. ☐ Other

EXAMINER'S ACTION

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Art Unit 2502

The following is a quotation of the first paragraph of 35 U.S.C. § 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The specification is objected to under 35 U.S.C. § 112, first paragraph, as the specification as originally filed does not provide support for the invention as is now claimed.^{where is the support for recitations;} In claim 20, lines 15-18, "...during said part of each half period, the instantaneous absolute magnitude of the high freq AC voltage being substantially equal to half that of the low-frequency AC voltage".

In claim 26, line 14, "the high frequency AC voltage being amplitude-modulated,..."

In claim 33, "the power factor of at least 80%"

In claim 36, "...a high frequency square wave..."

Claims 20-37 are rejected under 35 U.S.C. § 112, first paragraph, for the reasons set forth in the objection to the specification.

The following is a quotation of 35 U.S.C. § 103 which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that

the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

Claims 20-37 are rejected under 35 U.S.C. § 103 as being unpatentable over Spira in view of Kivari and Neumann.

The Spira et al reference discloses a high frequency inverter 22 illustrated in Figure 3, rectifier 21, illustrated in Figure 5, transmission line 36, illustrated in Figure 2, and lamp fixtures 40, 41. Further, in column 9, lines 25-34, the Spira et al reference teaches "Although the arrangement of Figure 4 shows the invention in connection with fluorescent lamps, it should be understood that the invention can be applied to the energization and dimming of any gas discharge lamp. Indeed, the invention can be used to operate and dim incandescent lamp..." and in column 7, lines 13-25, particularly, "Amplitude variation is obtained by delaying the application of the firing signal to thyristors 52 and 53 and thus varying the duty cycle of the inverter. Thus, the conduction time of the thyristors, during one half cycle, is reduced and less voltage is applied to the primary winding 56. The Neumann et al reference discloses a distribution system

including a track which permits selective connection thereto at any point along the length of the track by means of a connector member power by 120 volts or 240 volts, column 1, lines 35-70. See Kivari's column 1, lines 4-10, "A main object of the invention .. incandescent lamp adapted for use with ordinary house light circuit ... including means for reducing line voltage to a relatively low voltage ...". Given the Spira et al specific teaching of an incandescent lamp high frequency circuit without the ballast circuit of Figure 4, it would be obvious to use Kivari's incandescent lamp combination in lieu of ballast-lamp fixture 40. It would be equally as obvious to use the Neumann et al track power distribution means in lieu of the Spira et al transmission line distribution means 36. Note that the track means 11 of Neumann et al and track means DT of the instant case provide only mechanical support for the electrical conductors, the lamps, the sockets, ... etc. and that the operation frequency is immaterial to the track support since a track support means will support any frequency operating lamp or even a DC operating lamp. Spira further in Col.3, teaches that the output of the inverter is a periodic square waveform and the output amplitude of the inverter may be controlled by pulse control, pulsewidth modulation or DC input voltage. Spira in Col.5, discloses that the power factor for system is about 90% and as shown in figure 1 the rectifier network is connected directly with the power line

terminal.

Claims of present application recite features which was not disclosed in the parent application serial number 487,817 (See MPEP 201.11), therefore Nilssen '318 remains a valid reference in following rejections.

Claims 20-37 are rejected under 35 U.S.C. § 103 as being unpatentable over Nilssen '318 in view of Kivari and Newmann. Nilssen's high frequency converter of Figure 1 corresponds to the instant converter of Figure 1 with incandescent lamp THL and step-down transformer HFFT. Obviously, resistance R_3 varies the RC time constant of circuit R_2 , R_3 and C_3 with correspondly variable RMS voltage at terminals CJ and x. It would be obvious to connect across Nilssen's terminals CJ and x either a step-down transformer lamp combination, such as Kivari's step-down transformer lamp combination, or 120 volts incandescent lamp without a step-down transformer, especially since Kivari teaches the same type of step down transformer, one of ordinary skill in the art would consider obvious to substitute the lamp combination of Kivari for the lamp combination of Nilssen's at terminal CJ and x in order to reduce the line voltage. Further, it would be equally as obvious to support Nilssen's incandescent lamp system in a track support, such as the Neumann et al track support, because Nilssen teaches a high frequency converter being used for powering low-voltage incandescent lamps having a step down


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transformer, the combination of this circuit and a lamp (load) could be used in any form such as a track light as shown by Neumann.

Any inquiry concerning this communication should be directed to A. Zarabian at telephone number (703) 308-4905.

Zarabian/dw 
April 06, 1992


EUGENE R. LAROCHE
SUPERVISORY PATENT EXAMINER
GROUP ART UNIT 252